

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-001063**Date Inspected:** 14-Dec-2007**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1500**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Wu Ming Kai & Zhijiang**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG**Summary of Items Observed:**

The Caltrans Quality Assurance (QA) Inspector Charlie Franco was present at the time requested to randomly observe welding and associated operations being performed for the Orthotropic Box Girders (OBG).

Bay 7 OBG:

The QA Inspector observed ZPMC personnel performing heat straightening operations with a rose bud per ZPMC Heat Straightening Request (HSR) HSR1(B)-077, on Floor Beam Sections X94A (T=30mm SPCM) + X47A-2 (T=12mm) + X15A (T=12mm) at WJ FB008-06-023, 026. The QA Inspector observed that a 4.5 metric ton block had been placed along the entire length of WJFB008-06-023 on plate X15A (T=12mm) 30 mm from the edge of the WJ and a 1.5 metric ton block perpendicular to it on PL X94A. The attached photograph provides additional detail.

The QA Inspector randomly observed a ZPMC torch cutter utilizing a track mounted torch cutting apparatus, to trim the edges of Floor Beam Sub-Assembly X19B(T=12mm)+ X19C (T=12mm), which included WJ FB021-02-108. The attached photograph provides additional detail.

The QA Inspector observed ZPMC personnel performing heat straightening operations with a rose bud per ZPMC Heat Straightening Request (HSR) HSR1(B)-076, on Floor Beam Sections X46A (T=30mm SPCM) + X46C (T=12mm) + X14A (T=12mm) at WJ FB007-04-021, 026. The QA Inspector observed that a 4.5 metric ton block had been placed along the entire length of the WJFB007-04-021 on plate X14A (T=12mm) 30 mm from the edge of the WJ and a 1.5 metric ton block perpendicular to it on PL X46A. The attached photograph provides

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additional detail.

The QA Inspector randomly observed a ZPMC torch cutter utilizing a track mounted torch cutting apparatus, to trim the edges of Floor Beam Sub-Assembly X19B(T=12mm)+ X14C (T=12mm), which included WJ FB021-02-108. The attached photograph provides additional detail.

The QA Inspector observed ZPMC personnel performing a second heat straightening operation with a rose bud per ZPMC Heat Straightening Request (HSR) HSR1(B)-077, on Floor Beam Sections X94A (T=30mm SPCM) + X47A (T=12mm) + X15A (T=12mm) at WJ FB008-06-023, 026. The QA Inspector observed that a 4.5 metric ton block had been placed along the entire length of WJFB008-06-023 on plate X15A (T=12mm) 30 mm from the edge of the WJ and a 1.5 metric ton block perpendicular to it on PL X94A. The QA Inspector asked ZPMC CWI Li Zhijiang if this was a second heating operation and Mr. Li informed the QA Inspector that it was the third heat straightening operation per the above HSR1(B)-077. The attached photograph provides additional detail.

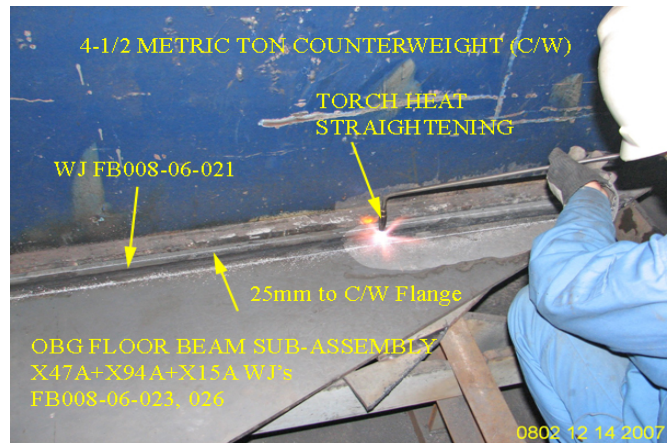
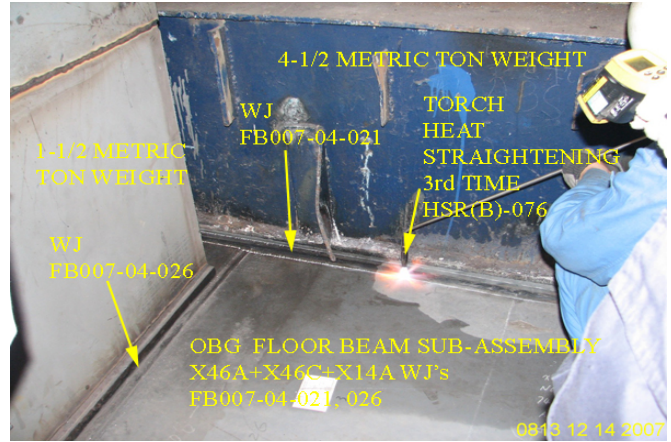
The QA Inspector randomly observed a ZPMC torch cutter utilizing a track mounted torch cutting apparatus, to trim the edges of Floor Beam Sub-Assembly X19B(T=12mm)+ X19A (T=12mm), which included WJ FB025-01-108.

The QA Inspector observed ZPMC personnel performing heat straightening operations with a rose bud per ZPMC Heat Straightening Request (HSR) HSR1(B)-078, on Floor Beam Sections X48A (T=30mm SPCM) + X48B (T=12mm) + X16A (T=12mm) at WJ FB008-06-023, 026. The QA Inspector observed that a 4.5 metric ton block had been placed along the entire length of WJFB008-06-023 on plate X15A (T=12mm) 30 mm from the edge of the WJ and a 1.5 metric ton block perpendicular to it on PL X94A. The QA Inspector asked to review the flatness measurements recorded by ZPMC heat straightening personnel. The QA Inspector observed that the recorded flatness measurements were taken at 4 separate locations and were as follows: location 1-7mm, location 2-9mm, location 3-11mm and location 4-8mm. The flatness measurements recorded by ZPMC appear to be in excess of those requiring the Engineer's approval for the heat straightening procedure per Caltrans Special Provisions, Section 8-3, for steel plate equal or less than 16mm in thickness. The thickness in this case is 12mm and ZPMC HSR1(B)-078, has not been approved by the Engineer.

The QA Inspector randomly observed a ZPMC torch cutter utilizing a track mounted torch cutting apparatus, to trim the edges of Floor Beam Sub-Assembly X20B(T=12mm)+ X20A (T=12mm), which included WJ FB026-02-108.

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Summary of Conversations:

As noted in the above body of this report.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mazen Wahbeh, (818) 292-0659, who represents the Office of Structural Materials for your project.

Inspected By: Franco,Charlie

Quality Assurance Inspector

Reviewed By: Cochran,Jim

QA Reviewer